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Atty. Docket No.: 22620/2002 PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Ramakrishnan et al.  
Serial No.: 09/904,779  
Filed: July 13, 2001  
Entitled: Crystal Structure of the 30S.  
Ribosome

Examiner: Ly, Cheyne D.  
Group Art Unit: 1631  
Conf. No.: 1824

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Kathleen M. Williams

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**TRANSMITTAL LETTER**

Enclosed for filing the above-identified patent application, please find the following documents:

1. Statement of Substance of Examiner Interview (May 25, 2004); and
2. Return Post Card.

The Commissioner for Patents is hereby authorized to charge any fees to Deposit Account No. 16-0085, Reference 22620/2002. A duplicate of this transmittal letter is enclosed for this purpose.

Respectfully submitted,



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Date: 6/28/04



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STATEMENT OF SUBSTANCE OF EXAMINER INTERVIEW

Sir:

This is filed in response to the Telephone Interview held on May 25, 2004 with Examiners Ly and Marschel. Applicants thank the examiners for the courtesy of the telephone interview with the undersigned attorney and Amy DeCloux, in which the outstanding rejections in the final office action were discussed. The final rejection mailed January 29, 2004, indicated that claims 1, 2 and 4 are allowed and that Claim 3 stands rejected. Accordingly, the rejections of Claim 3 were discussed in the interview, the substance of which is summarized below.

The final office action states that Claim 3 is rejected under 112 first paragraph, enablement, because "the specification, while being enabling for a crystal structure of the *Thermus thermophilus* 30S subunit having a resolution of 3.05 Å, which have the atom coordinates instantly disclosed, does not reasonably provide enablement for any 30S subunit, or any 30S subunit having a resolution numerically less than about 3 Å".

In the interview, Applicants' representative asked the examiners to reconsider this 112 first paragraph rejection of Claim 3. Applicants' representative argued that the specification provides enabling guidance to enable one skill in that art to crystallize a 30S ribosomal subunit from any procaryotic species to a resolution of 3.05 Å, especially considering the conserved structure of the 30S ribosomal subunit among procaryotes. Applicants' representative also argued that the office action had not met its burden in providing objective evidence that one skill in that art would not be able to crystallize a 30S subunit from any prokaryotic species to a resolution of 3.05 Å using the methods disclosed in the instant application, because the objective evidence cited in the rejection was based on the unpredictability of crystallization of any individual protein. Applicants noted that the problems cited by the examiner's to support the unpredictability of crystallizing a single protein, including acquiring adequate amount of protein, protein purification and protein conformation, are not applicable to the crystallization of 30S ribosomal subunit structures which, unlike most individual proteins, are abundant, easily purified, and have a conserved, structure.

The Examiners took the position that if there is objective evidence of the unpredictability in crystallizing a single protein to 3 Å, then there must be unpredictability in the art of crystallizing any 30S ribosomal subunit to 3 Å as well due to the multicomponent nature of the 30 S ribosomal subunit which comprises multiple proteins and RNA.

It is believed that no fees are due. However, if overlooked, the Commissioner for Patents is hereby authorized to charge all fees in the total amount to Deposit Account 16-0085, Reference No. 22620/2002.

Respectfully submitted,

Date: 6/28/04

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